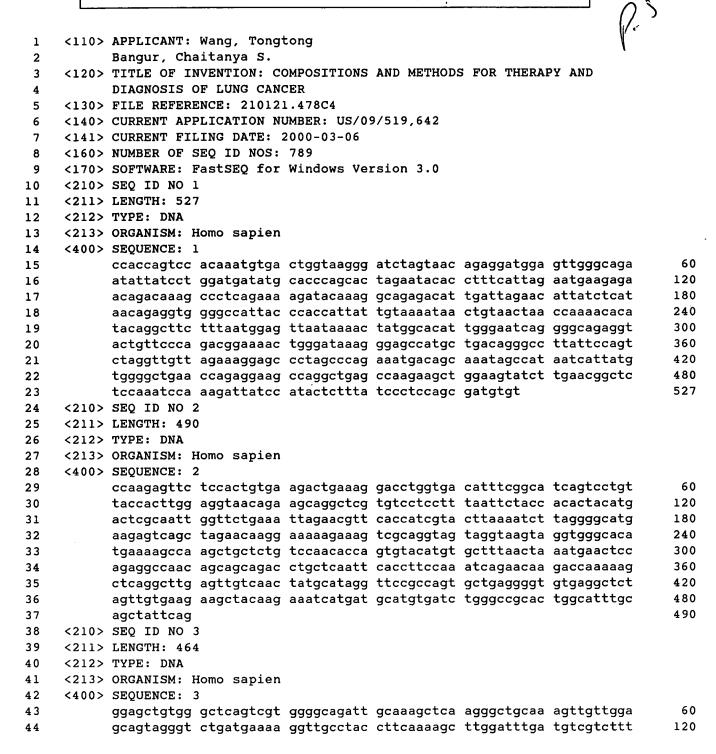
#### RAW SEQUENCE LISTING PATENT APPLICATION US/09/519,642

DATE: 03/27/2000 TIME: 16:42:54

Input Set: I519642.RAW

#### This Raw Listing contains the General Information Section and up to first 5 pages.



# RAW SEQUENCE LISTING PATENT APPLICATION US/09/519,642

US/09/519,642 TIME: 16:42:54

Input Set: I519642.RAW

DATE: 03/27/2000

| 45         |       | aactacaaga cggtagagtc |            |            |            |            | 180 |
|------------|-------|-----------------------|------------|------------|------------|------------|-----|
| 46         |       | gattgttatt ttgataatgt |            |            |            |            | 240 |
| 47         |       | aaatttggaa ggattgccat |            |            | _          |            | 300 |
| 48         |       | ccccaggcc caccccaga   |            |            |            |            | 360 |
| 49         |       | gtctaccgct ggcaaggaga |            |            |            | gaaatgggtc | 420 |
| 50         |       | ttagagttta aatttcagct | tccctacttt | gtaattgact | gact       |            | 464 |
| 51         | <210> | SEQ ID NO 4           |            |            |            |            |     |
| 52         | <211> | LENGTH: 510           |            |            |            |            |     |
| 53         | <212> | TYPE: DNA             |            |            |            |            |     |
| 54         | <213> | ORGANISM: Homo sapien |            |            |            |            |     |
| 55         | <400> | SEQUENCE: 4           |            |            |            |            |     |
| 56         |       | ccttatcaca ctgtaagtgg | tccaagccca | tagggatgct | ctttttggtt | cctggaattt | 60  |
| 57         |       | ccagttggat gtgacagaga | tctttcagta | taggtctaag | tcaagagtag | cctctgggtt | 120 |
| 58         |       | gaggtgggct gggagattaa | catcttacct | ggggtccttc | agataaacct | gttggttttt | 180 |
| 59         |       | cctgtctcat acaggcccat | cttaagtttt | gatgttgaat | taaaactact | tctaccccct | 240 |
| 60         |       | tagttataaa aaaggccaca | aggagcattt | atgtggatat | ctggaagtga | gatagttatt | 300 |
| 61         |       | ccattcccag gaaaagaaaa | ataaagctaa | gttacaaaac | taaatctata | tgcaataaag | 360 |
| 62         |       | ttattatata ctgctttgtt | taagcagagt | cctctggaat | ttatgtacag | tacattagtt | 420 |
| 63         |       | ttcagctatt tatattccac | aagttagacc | ttaagattct | ctggttttaa | gacaattgtt | 480 |
| 64         |       | aaagatactt ctaaagctct |            | _          |            | _          | 510 |
| 65         | <210> | SEQ ID NO 5           |            |            |            |            |     |
| 66         | <211> | LENGTH: 452           |            |            |            |            |     |
| 67         | <212> | TYPE: DNA             |            |            |            |            |     |
| 68         | <213> | ORGANISM: Homo sapien |            |            |            |            |     |
| 69         | <400> | SEQUENCE: 5           |            |            |            |            |     |
| 70 .       |       | acagogooto acgoacotga | gccccgagga | gaaggcgctg | aggaggaaac | tgaaaaacag | 60  |
| 71         | 1     | agtagcagct cagactgcca | gagatcgaaa | gaaggctcga | atgagtgagc | tggaacagca | 120 |
| 72         |       | agtggtagat ttagaagaag | agaaccaaaa | acttttgcta | gaaaatcagc | ttttacgaga | 180 |
| 73         |       | gaaaactcat ggccttgtag | ttgagaacca | ggagttaaga | cagcgcttgg | ggatggatgc | 240 |
| 74         |       | cctggttgct gaagaggagg | cggaagccaa | ggtaaatcat | ctcctttatt | tggtgcctca | 300 |
| 75         |       | tgtgagtact ggttccaagt | gacatgaccc | agcgattatg | tttacagtct | ggacttctga | 360 |
| 76         |       | tcaagagcgt tcttgaaatt | ttccttcagt | tttaagacat | tttcatgcag | gcagagtgtt | 420 |
| 7 <b>7</b> |       | cttcccctaa aggcacttga | cactcatttt | tt         |            |            | 452 |
| 78         | <210> | SEQ ID NO 6           |            |            |            |            |     |
| 79         | <211> | LENGTH: 336           |            |            |            |            |     |
| 80         | <212> | TYPE: DNA             |            |            |            |            |     |
| 81         | <213> | ORGANISM: Homo sapien |            |            |            |            |     |
| 82         | <400> | SEQUENCE: 6           |            |            |            |            |     |
| 83         |       | tatagagtgc tgacatctga | cattgagaaa | ttcatgccta | ttgtttatac | tcccactgtg | 60  |
| 84         |       | ggtctggctt gccaacaata | tagtttggtg | tttcggaagc | caagaggtct | ctttattact | 120 |
| 85         |       | atccacgatc gagggcatat | tgcttcagtt | ctcaatgcat | ggccagaaga | tgtcatcaag | 180 |
| 86         |       | gccattgtgg tgactgatgg | agagcgtatt | cttggcttgg | gagaccttgg | ctgtaatgga | 240 |
| 87         |       | atgggcatcc ctgtgggtaa |            |            |            |            | 300 |
| 88         |       | gaatgtctgc ctgtcattct |            |            |            |            | 336 |
| 89         | <210> | SEQ ID NO 7           |            |            |            |            |     |
| 90         | <211> | LENGTH: 376           |            |            |            |            |     |
| 91         | <212> | TYPE: DNA             |            |            |            |            |     |
| 92         | <213> | ORGANISM: Homo sapien |            |            |            |            |     |
| 93         | <400> | SEQUENCE: 7           |            |            |            |            |     |
| 94         |       | ctgtgggaaa cctcattgtt | ctgtacaaag | tactagctaa | accagaaagg | tgattccagg | 60  |
|            |       |                       | _          | _          |            |            |     |

### RAW SEQUENCE LISTING PATENT APPLICATION US/09/519,642 DATE: 03/27/200 TIME: 16:42:54

DATE: 03/27/2000

Input Set: I519642.RAW

| 95       |       | aggagttagc caaacaacaa |            |             |            |            | 120 |
|----------|-------|-----------------------|------------|-------------|------------|------------|-----|
| 96       |       | atatctttgg ataatgttat |            |             |            |            | 180 |
| 97       |       | agatggtaag acctctgaga |            |             |            |            | 240 |
| 98       |       | cagaatggat catgtccccc |            |             |            |            | 300 |
| 99       |       | gaaagaaaga aagaaagaag | actgtgtttt | tgccactgat  | ttagccatgt | gaaactcatc | 360 |
| 100      |       | tcattaccct tttctg     |            |             |            |            | 376 |
| 101      | <210> | SEQ ID NO 8           | ,          |             |            |            |     |
| 102      | <211> | LENGTH: 406           |            |             |            |            |     |
| 103      | <212> | TYPE: DNA             |            |             |            |            |     |
| 104      | <213> | ORGANISM: Homo sapien |            |             |            |            |     |
| 105      | <400> | SEQUENCE: 8           |            |             |            |            |     |
| 106      |       | ggtagggagc aattctatta | tttggcattg | catggctggg  | ttgaattaaa | acagggagtg | 60  |
| 107      |       | agaacaggtg agtctagaag | tccaactctg | aaaaggacca  | ctgtacattt | gaacacacgg | 120 |
| 108      |       | ctgtgttaaa gatgctgcta | atgtcagtca | ctgggtgcac  | taaaggatct | cttattttat | 180 |
| 109      |       | gtaaaacgtt gggattgaca |            |             |            |            | 240 |
| 110      |       | cttcttgtga aatactaatg | acagcatcat | cctgccaagc  | gaaagaggca | ggcataagca | 300 |
| 111      |       | aggacaaatt aaaagggggt |            |             |            |            | 360 |
| 112      |       | gggaaaagct gtccatagtg |            |             |            |            | 406 |
| 113      | <210> | SEQ ID NO 9           | •          |             |            |            |     |
| 114      | <211> | LENGTH: 330           |            |             |            |            |     |
| 115      | <212> | TYPE: DNA             |            |             |            |            |     |
| 116      | <213> | ORGANISM: Homo sapien |            |             |            |            |     |
| 117      |       | SEQUENCE: 9           |            |             |            |            |     |
| 118      |       | actactacca agagetgeag | agagacattt | ctgaaatgtt  | tttgcagatt | tataaacaag | 60  |
| 119      |       | ggggttttct gggcctctcc |            |             |            |            | 120 |
| 120      |       | ctctggcctt ccgagaaggt |            |             |            |            | 180 |
| 121      |       | ataaaacgga agcagcctct |            |             |            |            | 240 |
| 122      |       | tgccatttcc tttctctgcc |            |             |            |            | 300 |
| 123      |       | tggtgctggt ctgtgttctg |            |             |            |            | 330 |
| 124      | <210> | SEQ ID NO 10          | 5 5 5 55   |             |            |            |     |
| 125      |       | LENGTH: 449           |            |             |            | D.         |     |
| 126      | <212> | TYPE: DNA             |            |             |            |            |     |
| 127      | <213> | ORGANISM: Homo sapien |            |             |            |            |     |
| 128      |       | SEQUENCE: 10          |            |             |            |            |     |
| 129      |       | ctgacggctt tgctgtccca | gagccgccta | aacgcaagaa  | aagtcgatgg | gacagttaga | 60  |
| 130      |       | ggggatgtgc taaagcgtga |            |             |            |            | 120 |
| 131      |       | ggtgtctcag ggctgggttg |            |             |            |            | 180 |
| 132      |       | tggagcttgg agacattacc |            |             |            |            | 240 |
| 133      |       | tgttttggtc cttggaagca | _          |             |            |            | 300 |
| 134      |       | catgcgggta agttgaggtt |            |             |            |            | 360 |
| 135      |       | taggtttata ttgtatgtag |            |             |            |            | 420 |
| 136      |       | aaattgagtt ctttttctta |            | 55          | •          | •          | 449 |
| 137      | <210> | SEQ ID NO 11          | 5 5 55     |             |            |            |     |
| 138      |       | LENGTH: 472           |            |             |            |            |     |
| 139      |       | TYPE: DNA             |            |             |            | •          |     |
| 140      |       | ORGANISM: Homo sapien |            |             |            |            |     |
| 141      |       | SEQUENCE: 11          |            |             |            |            |     |
| 142      |       | cctcgatgca tgctgctcta | cctctcatca | gcccacagtc. | tgacacgagg | tcatctttqq | 60  |
| 143      |       | tctgtggtga ggtatggatg |            |             |            |            | 120 |
| 144      |       | aacccttggg ggataagaca |            |             |            |            | 180 |
| <b>-</b> |       |                       | J          | J           | 33 3       | 5 5        |     |

# RAW SEQUENCE LISTING PATENT APPLICATION US/09/519,642

DATE: 03/27/2000 TIME: 16:42:54

Input Set: I519642.RAW

|       | 145        |                    | tccaaagaga aaggtacggc ctccaagggg gcagcttaag ccaacatgta agacttgggc  | 240        |
|-------|------------|--------------------|--|------------|
|       | 146        |                    | acgatgaaag gacgggggtc cagctacgaa tgtttttgtt cttgatgtca agttgccagc  | 300        |
|       | 147        |                    | tactggaagg caggagcagt ttcttctttt tcccactctg tgctgggtac ttgggagagg  | 360        |
|       | 148        |                    | cgaaataaat accagactgt ccactcctca gcctaaggtc cttctcaagt cctgcacact  | 420        |
|       | 149        |                    | cagcacttgc tctttaacgt ggcatatgtt cccccatctt cccctggtaa tg  | 472        |
|       | 150        |                    | SEQ ID NO 12   |            |
|       | 151        |                    | LENGTH: 371  |            |
|       | 152        |                    | TYPE: DNA  |            |
|       | 153        |                    | ORGANISM: Homo sapien  |            |
|       | 154        | <400>              | SEQUENCE: 12   |            |
|       | 155        |                    | ttttttttt tttttttt ttttggarat ttgkcacatt ttattcagwa tttctgctgc   | 60         |
|       | 156        |                    | actgccagcc tagggatgca cttgattccc aagaaatgca actgtcctat tcgcaragcc  | 120        |
|       | 157        |                    | gtccacaggt acctacccc tggactgcag caactttatt accttaacta gcacaraaca   | 180        |
|       | 158        |                    | gaggttgatt taaactcctt acactcactt ctcaratcaa tgaatgggca aaraaacmcc  | 240        |
|       | 159        |                    | tcatggctct gggaaggcat gctgaraccc gtttttgcaa gtcctgagga atggaaraat  | 300        |
|       | 160        |                    | atagctgcca ggtatcccaa gtctagggca gggagggkag tatcggcatc actttcactg  | 360        |
|       | 161        |                    | cattctgttg g   | 371        |
|       | 162        |                    | SEQ ID NO 13   |            |
|       | 163        |                    | LENGTH: 493  |            |
|       | 164        |                    | TYPE: DNA  |            |
|       | 165        |                    | ORGANISM: Homo sapien  |            |
|       | 166        |                    | FEATURE:   |            |
|       | 167        |                    | NAME/KEY: misc_feature   | •          |
|       | 168        |                    | LOCATION: (1)(493)   |            |
|       | 169        |                    | OTHER INFORMATION: n = A,T,C or G  |            |
|       | 170        | <400>              | SEQUENCE: 13   |            |
|       | 171        |                    | ccagtccaac ctgctcctca ttattgtata aatgagcaga atcaatatgg cggaagccag  | 60         |
|       | 172        |                    | ctycaattgc caatttggtg gcctctaaag ctttactttt aggaacctct gcaggcgcat  | 120        |
| F.1 . | 173        |                    | aggtgccaaa tcccaggaca ggcatgaagt gaccatcatt cagcttcaca cactgatatt  | 180        |
| ₩>    | 174<br>175 |                    | tcgaatccat ttctgtcnnn nnnnnnnnn nnnnnnnnn nnnnnnnnn nnnnnn   | 240        |
|       | 175        | •                  | caacctgctc ctcattattg taaacatgtg cagaatcaat atggcggaac ccagcttcta  | 300        |
|       | 175        |                    | ttgctaattt tgtgacctcc aaagetttac ttctcggaac cttggttctt ccgagcgctc agcaatcccg ccgagcttct ttgagacgtc ctcaggtgtc ctttgacgat gcgtcctcca    | 360        |
|       | 178        |                    | ctttcacaca ctctagcatt ccttcactgg ggtcttcatt gccccacatt gggcagccag  | 420        |
|       | 178        |                    | gaatgttggg gtg   | 480<br>493 |
|       | 180        | <b>/210</b> >      | SEQ ID NO 14   | 493        |
|       |            |                    | <del>-</del>   |            |
|       | 181<br>182 |                    | LENGTH: 540 TYPE: DNA  |            |
|       | 183        |                    | ORGANISM: Homo sapien  |            |
|       | 184        |                    | SEQUENCE: 14   |            |
|       | 185        | \ <del>4</del> 00> | ccagatggtc cataatatgt caccgagcag gtgaatggca tttgtatgtc agccttggtt  | 60         |
|       | 186        |                    | gtettgtact ceagggtgga agteatggta tagagetgag teaetgggte cattteettt  |            |
|       | 187        |                    | ttaaaattat gaccaccgct ccttcaaggg gatgtagcac ttttccattc ctgtaccatg  | 120<br>180 |
|       | 188        |                    | tgatattgcc atctggataa ctgtcttctg aaatgcagtc acccaacttt tttagctgct  |            |
|       | 189        |                    | ctgtttcgag aaacagtgct ttgcttacaa tttcaggttt agatggttgc ttgaacacct  | 240        |
|       | 199        |                    | tgactattgt aggtgcctca aacacgttgt cctcagttac tagcatgcac acaaatctct  | 300        |
|       | 190        |                    | tttcatcact gatecttgca ttactgatag acaaagtgta gttttctgag aggttcaatc  | 360        |
|       | 191        |                    | titication gatecitiges tracigated acadegigts gitticigag aggitteatic tgicititgta ticiggtaca tegicgiact geacactiti citigiagag gatetgaagg | 420        |
|       | 192        |                    | caataaatac tggggagcca tcgggctttt catatttcca tttgcccaaa catgagattc  | 480        |
|       | 193        | Z2105              | SEQ ID NO 15   | 540        |
|       | 174        | <b>\Z10</b> >      | סד או עד אֿשני   |            |

5

RAW SEQUENCE LISTING

PATENT APPLICATION US/09/519,642

TIME: 16:42:54

DATE: 03/27/2000

Input Set: I519642.RAW

|      |       | •                     |            | •          |                    |            |     |
|------|-------|-----------------------|------------|------------|--------------------|------------|-----|
| 195  | <211> | LENGTH: 421           |            |            |                    |            |     |
| 196  | <212> | TYPE: DNA             |            | •          |                    |            |     |
| 197  | <213> | ORGANISM: Homo sapien |            |            |                    |            |     |
| 198  | <400> | SEQUENCE: 15          |            |            |                    | •          |     |
| 199  |       | tacccacctc cagcctccca | tgtgagcctg | tccttatgta | tagtgtccaa         | cctctgattc | 60  |
| 200  |       | tagcagtcaa gtgtcttccc |            |            |                    |            | 120 |
| 201  |       | atctcttgtt ccttgggact | ggggccagcc | tcttgtctgc | ${\tt ccacttccct}$ | ctcattagtc | 180 |
| 202  |       | agatagcccc aaaggctcta | tctttagctc | ccagagaact | ttttggtcct         | cagtatttcc | 240 |
| 203  |       | cttccccttt ccttcctatt | ccccacaact | gggggaggga | agggagaaca         | ggggcacctg | 300 |
| 204  |       | atcatcaatc tccctgccc  | ctctcttgaa | gccccctaga | tttggatgaa         | gagcaggcca | 360 |
| 205  |       | gtgagcaggg caaagcctgc | taggagcaga | atgaccttga | ggatcctttg         | ctcagaactg | 420 |
| 206  |       | g                     | *          |            |                    |            | 421 |
| 207  | <210> | SEQ ID NO 16          |            |            |                    |            |     |
| 208  | <211> | LENGTH: 236           |            | •          |                    |            |     |
| 209  | <212> | TYPE: DNA             |            |            |                    |            |     |
| 210  | <213> | ORGANISM: Homo sapien |            |            |                    |            |     |
| 211  | <400> | SEQUENCE: 16          |            |            |                    | -          |     |
| 212  |       | gccgtgtgtg cttttcccag | tgccgaggta | cctatcgctc | acggccagga         | gcttgtcgtg | 60  |
| 213  |       | gctgacagca aagagctgct | ctctgtgggc | ctgcttcatc | tcatccgaga         | ggccgtacaa | 120 |
| 214  |       | gaagtggtcc attcctttgt | ctgaaggagc | gacaggagca | tctacggttg         | agaagacaga | 180 |
| 215  |       | aagtttggct tcgtcgatgt | cttgctgtgt | gaattttcca | gacttagccc         | agtcga     | 236 |
| 216  | <210> | SEQ ID NO 17          |            |            |                    |            |     |
| 217  | <211> | LENGTH: 424           |            |            |                    |            |     |
| 218  | <212> | TYPE: DNA             | •          |            |                    |            |     |
| 219  | <213> | ORGANISM: Homo sapien |            |            |                    |            |     |
| 220  | <400> | SEQUENCE: 17          |            | -          |                    |            |     |
| 221  |       | ccagaaaggt gacagtggtt | ttccagggcc | tcctgggcct | ccaggtccac         | ctggtgaagt | 60  |
| 222. |       | cattcagcct ttaccaatct | tgtcctccaa | aaaaacgaga | agacatactg         | aaggcatgca | 120 |
| 223  | •     | agcagatgca gatgataata | ttcttgatta | ctcggatgga | atggaagaaa         | tatttggttc | 180 |
| 224  |       | cctcaattcc ctgaaacaag |            |            |                    |            | 240 |
| 225  |       | tccagcccga acttgtaaag |            |            |                    |            | 300 |
| 226  |       | ttggattgat cctaaccaag |            | _          | _                  | _          | 360 |
| 227  |       | atctggtggt gagacttgca | tttatccaga | caaaaaatct | gagggagtaa         | gaatttcatc | 420 |
| 228  |       | atgg                  |            |            |                    |            | 424 |
| 229  | <210> | SEQ ID NO 18          |            |            |                    |            |     |
| 230  |       | LENGTH: 154           |            |            |                    |            |     |
| 231  | <212> | TYPE: DNA             |            |            |                    |            |     |
| 232  |       | ORGANISM: Homo sapien | •          |            |                    |            |     |
| 233  | <400> | SEQUENCE: 18          |            |            |                    |            |     |
| 234  |       | gtcaccaact ccttcagcgc |            |            |                    |            | 60  |
| 235  |       | aggacaattg aaatttgcta |            |            | ggaaaaggga         | gaaaaagaaa | 120 |
| 236  |       | cacaagagac ttaaaggaca | ggaggaggag | atgg       |                    |            | 154 |
| 237  | <210> | SEQ ID NO 19          |            |            |                    |            |     |
| 238  |       | LENGTH: 445           |            |            |                    |            |     |
| 239  |       | TYPE: DNA             |            |            |                    |            |     |
| 240  |       | ORGANISM: Homo sapien |            |            |                    |            |     |
| 241  | <400> | SEQUENCE: 19          |            |            |                    |            |     |
| 242  |       | caacaaaatt ggtgaacaca |            |            |                    |            | 60  |
| 243  |       | aattaaagtt gaacaaattg |            |            |                    |            | 120 |
| 244  |       | caccaatagt gaggaaatca | ttgaaggaga | atataatacg | gtgatgctgg         | caataggaag | 180 |

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

